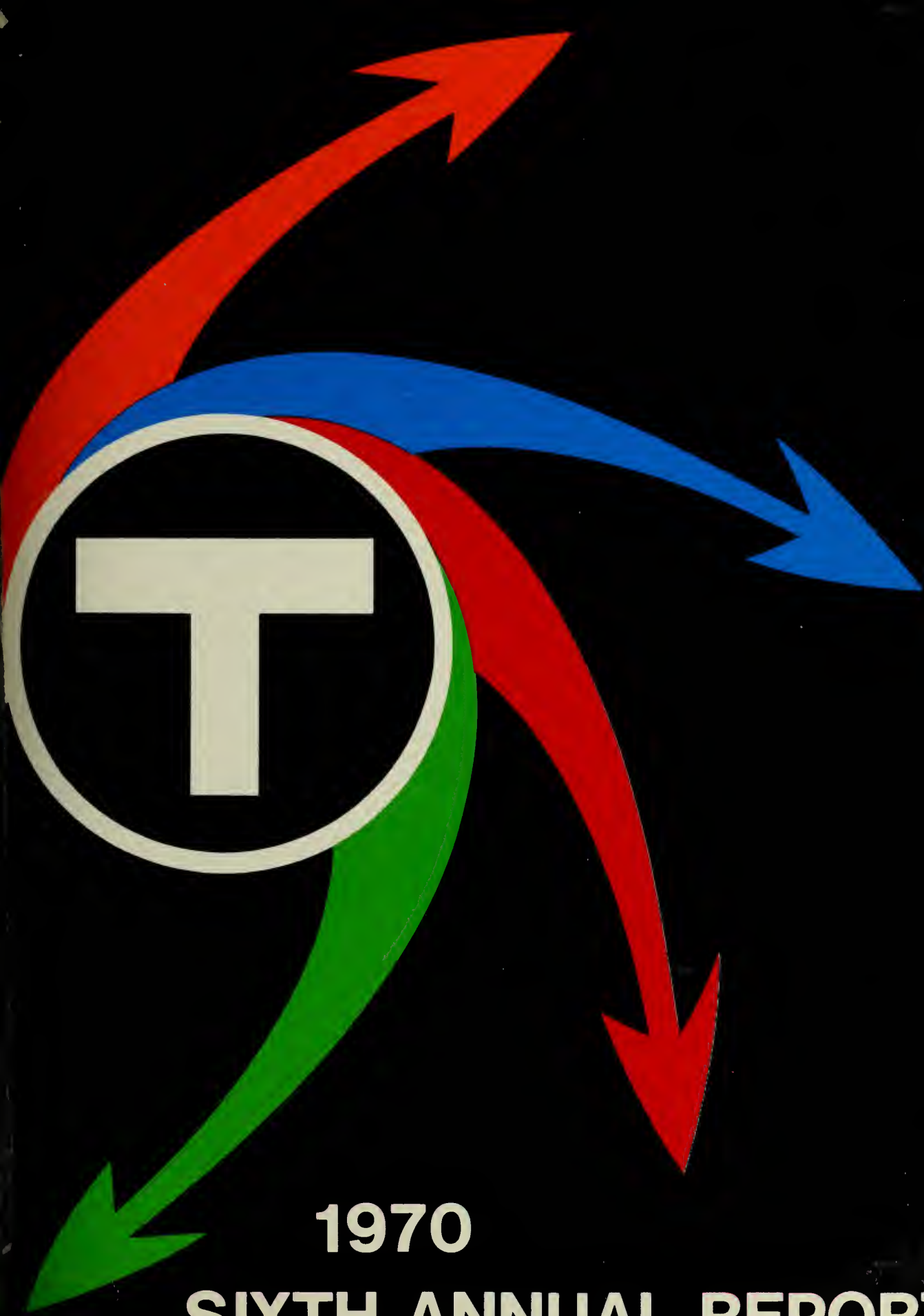


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1970

SIXTH ANNUAL REPORT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

COMPREHENSIVE PROGRAM FOR MASS TRANSPORTATION

During the 1970 fiscal period, one revision was made to the Master Plan. On December 19, 1969, the Advisory Board to the Authority unanimously approved the purchase by the Authority of approximately 24 acres of land in the Penn Central Railroad's Dover Street Yards in the South Bay, Boston. The approval permitted the Authority to proceed with applications to the Federal government for assistance in funding the construction of yards and shops for the Cambridge-Dorchester and South Shore rapid transit lines and a major bus garage to serve the central portion of the Authority's district.

In the 1970 fiscal period, grant applications totalling \$42,246,657.00 were submitted to the federal government. These applications included the financing of the South Bay Maintenance Center which will house the Cambridge-Dorchester and South Shore rapid transit yards and shops and a major consolidation bus garage facility. Grant applications were also filed for supplementary funds to construct the South Quincy-North Braintree Station on the South Shore Line, to build the Ivory Street access road to the South Braintree Station on the same line, to install electronic fare collection equipment on the South Shore line and to handle the costs of escalation and changes in the scope of that project.

A Managerial Training Grant from the Federal government assisted the Authority in providing fellowships for the training of MBTA personnel. This grant, requiring no local monies, amounted to \$15,031.00, and resulted in limited-duration study for seven middle-management employees.

The MBTA became the focus of a \$346,000 study grant to identify job applicants trainable as transit equipment operators. When completed, all transit agencies will have improved means of seeking and retaining reliable, service-oriented personnel chosen on a non-discriminatory basis.

SIXTH ANNUAL REPORT 1970

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

TO:

His Excellency the Governor,
The General Court, and
The Advisory Board of the Massachusetts
Bay Transportation Authority

In accordance with the requirements of Section 5 (h) of Chapter 161A of the General Laws, as modified by Chapter 650 of the Acts of 1965, the Directors of the Massachusetts Bay Transportation Authority herewith render the sixth report of the Authority which covers the results of operations for the fiscal period December 1, 1969, through December 31, 1970.

SUMMARY OF THE NET COST OF SERVICE FROM DECEMBER 1, 1969, THROUGH DECEMBER 31, 1970

Total income for the period was \$66,798,085.49. Total expenses for the period were \$132,984,195.37. This total includes various fixed charges and the sum of \$90,701,939.73 for wages and fringe benefits.

The difference between total income and total expenses is \$66,186,109.88 and represents the cost of service in excess of income for the thirteen month fiscal period.

This figure, less state financial contract assistance of \$13,977,685.77, fuel tax reimbursement of \$367,647.02, reimbursement from outside communities of \$181,232.00 and an unreimbursed deficit relating to depreciation in the amount of \$449,875.00, brings the net assessable cost of service for the 79 communities of the Authority district to \$51,209,670.09.

In addition to the net cost of service, there are three other items which must be considered by the 79 cities and towns in their 1971 account settlement with the Commonwealth of Massachusetts. These are illustrated by the following table:

Net Cost of Service	\$51,209,670.09
Interest Charged by State Treasurer on Temporary Borrowings (Estimated)	1,450,000.00
Expenses of Boston Metropolitan District	16,000.00
TOTAL	\$52,675,670.09
Less Pupils' Reimbursement Chapter 71, Section 7B (Estimated)	\$ 1,031,000.00
NET COST TO COMMUNITIES	\$51,644,670.09

The Net Cost of Service to the Communities reflects the reality that public transportation services are essential to the economic health of the metropolitan area, and should no more be expected to return a "profit" than other essential services such as police, fire, and public works. Urban transportation systems worldwide operate under financial subsidization, based on the fact that these basic functions provide important economic and social benefit to urban communities. The cost of service is a public investment, like so many others, in the economic vitality of the region.

The following table illustrates the Authority's net cost of service including all elements of cost for the fiscal operation and the apportionment of these costs by express and local service according to the formulae contained in the legislation establishing the Authority:

Statement of Net Cost of Service-Loss-By Express and Local

FISCAL PERIOD DECEMBER 1, 1969 TO DECEMBER 31, 1970

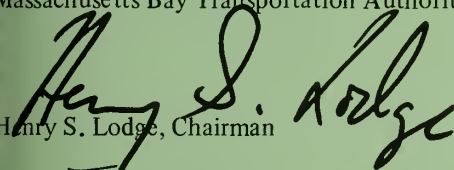
	Express Service	Local Service	Total
Income:			
Revenue from Transportation	\$30,258,216.91	\$30,419,474.10	\$60,677,691.01
Revenue from Other Rwy. Operations	700,775.21	239,910.82	940,686.03
Non-Operating Income	3,270,473.05	1,909,235.40	5,179,708.45
TOTAL INCOME	34,229,465.17	32,568,620.32	66,798,085.49
Operating Wages and Fringe Benefits:			
Wages	31,224,593.89	42,532,013.13	73,756,607.02
M.B.T.A. Pensions	3,847,288.14	5,099,893.58	8,947,181.72
Social Security Taxes	1,024,048.85	1,357,460.11	2,381,508.96
Workmen's Compensation	375,162.30	501,856.93	877,019.23
Accident and Sickness Insurance	198,627.49	263,296.90	461,924.39
Group Life Insurance	291,461.36	386,355.75	677,817.11
Blue Cross-Blue Shield	1,446,705.42	1,917,725.80	3,364,431.22
Unemployment Insurance	9,069.56	12,022.44	21,092.00
Uniform and Work Clothes	83,060.99	131,297.09	214,358.08
TOTAL OPERATING WAGES AND FRINGE BENEFITS	38,500,018.00	52,201,921.73	90,701,939.73
Material and Other Items	3,972,812.55	5,053,704.00	9,026,516.55
Injuries and Damages	466,215.09	1,791,659.61	2,257,874.70
Depreciation	(214,130.00)	664,005.00	449,875.00
Interest on Unfunded Debt	870,748.85	2,478,285.20	3,349,034.05
Fuel	1,384,334.06	1,291,770.98	2,676,105.04
Taxes (Other than included above)	65,792.78	601,576.97	667,369.75
Railroad Commuter Subsidy	5,970,512.76	—	5,970,512.76
Middlesex & Boston Subsidy	—	964,368.80	964,368.80
Rapid Transit Inc. Subsidy	—	120,872.97	120,872.97
TOTAL OPERATING EXPENSES AND TAXES	51,016,304.09	65,168,165.26	116,184,469.35
Fixed Charges:			
Interest on Funded Debt (M.T.A.)	2,960,889.59	1,095,123.55	4,056,013.14
Interest on Funded Debt (M.B.T.A.)	4,748,206.10	358,161.49	5,106,367.59
Payment on Funded Debt (M.T.A.)	2,283,580.07	1,722,700.80	4,006,280.87
Payment on Funded Debt (M.B.T.A.)	2,979,166.66	480,072.12	3,459,238.78
Cambridge Subway Rental	150,952.60	—	150,952.60
Miscellaneous Debits	9,924.23	3,670.60	13,594.83
Bank Service Charges (M.B.T.A.)	6,695.96	582.25	7,278.21
TOTAL FIXED CHARGES	13,139,415.21	3,660,310.81	16,799,726.02
TOTAL CURRENT EXPENSES	64,155,719.30	68,828,476.07	132,984,195.37
COST OF SERVICE IN EXCESS OF INCOME	29,926,254.13	36,259,855.75	66,186,109.88
Less:			
State Fin. Contract Assist. — M.T.A.	3,250,000.00	—	3,250,000.00
State Fin. Contract Assist. — M.B.T.A.	5,170,516.50	416,170.13	5,586,686.63
Gas & Diesel Taxes Reimbursable	—	367,647.02	367,647.02
State Financial Contract Assistance on Railroad Subsidy	5,140,999.14	—	5,140,999.14
Reimbursement from Outside Communities	—	181,232.00	181,232.00
TOTAL CONTRACT ASSISTANCE AND ADJUSTMENTS	13,561,515.64	965,049.15	14,526,564.79
NET COST OF SERVICE — LOSS	16,364,738.49	35,294,806.60	51,659,545.09
LESS — UNREIMBURSED DEFICIT	(214,130.00)	664,005.00	449,875.00
NET ASSESSABLE COST OF SERVICE	\$16,578,868.49	\$34,630,801.60	\$51,209,670.09

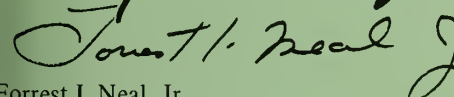
Financial Statements

The balance sheet and statement of long-term debt of the Massachusetts Bay Transportation Authority as of December 31, 1970, and the related statements of revenue and cost of service, unreimbursed cost of service, and source and disposition of funds for the thirteen month period ended December 31, 1970, together with notes relating to these financial statements are appended to this report.

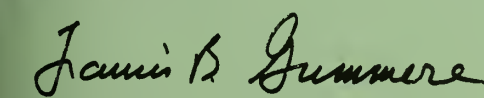
Respectfully submitted,

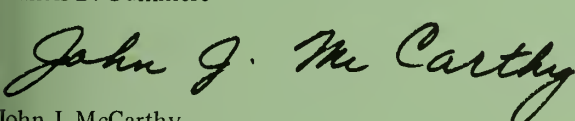
Board of Directors
Massachusetts Bay Transportation Authority


Henry S. Lodge, Chairman


Forrest I. Neal, Jr.


Richard D. Buck


Francis B. Gummere


John J. McCarthy

March 31, 1971

ARTHUR ANDERSEN & CO.

Boston, Massachusetts

To the Board of Directors of
Massachusetts Bay Transportation Authority:

We have examined the balance sheet and statement of long-term debt of MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (a political subdivision of the Commonwealth of Massachusetts) as of December 31, 1970, and the related statements of revenue and cost of service, unreimbursed cost of service, and source and disposition of funds for the thirteen month period ended December 31, 1970. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

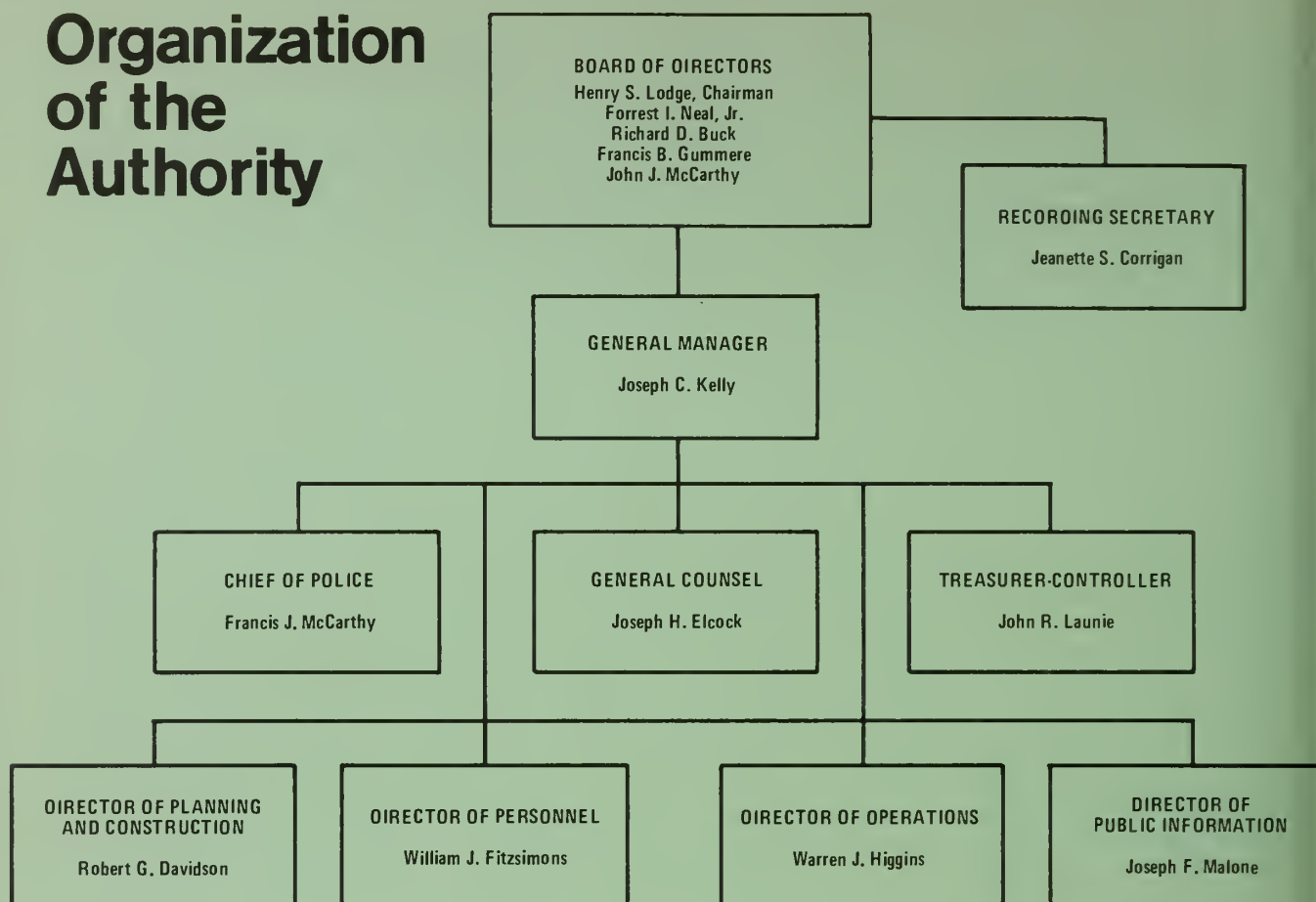
In our opinion, the accompanying financial statements present fairly the financial position of the Massachusetts Bay Transportation Authority as of December 31, 1970, and the results of its operations and the source and disposition of funds for the thirteen month period ended December 31, 1970, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.



Boston, Massachusetts

March 18, 1971.

Organization of the Authority



STATISTICS 1970

Population of 79 Communities in M.B.T.A.	
District (Latest U.S. Census, 1970)	2,763,410
Trackless Trolleys	58
Streetcars	343
Rapid Transit Cars	356
Buses	1,226
Number of Rapid Transit Routes	3
Number of Trackless Trolley Routes	4
Number of Streetcar Routes	5
Number of Bus Routes	201
Rapid Transit Stations	48
Single Track Rapid	
Transit Train Mileage	64.3
Single Track Streetcar Mileage	86.7
Weekly Vehicle Trips Operated	81,786

Weekly Vehicle Miles Operated	875,517
Proposed Rapid Transit	
Extensions (miles)	29.0
Daily Passenger Load (approx.)	575,000
Annual Passenger Load (approx.)	186,000,000
Employees (Dec., 1970)	6,579
Bargaining Units	27
Boston Elevated Railway	
Company (Chartered)	1894
Public Control Act (By Legislation)	1918
Metropolitan Transit Authority -	
MTA (By Legislation)	1947
Massachusetts Bay Transportation	
Authority - M.B.T.A.	
(By Legislation)	1964

GENERAL MANAGER



Joseph C. Kelly



Leo J. Cusick

Leo J. Cusick
resigned as
General Manager
of the M.B.T.A.,
effective
June 1, 1970

BOARD OF DIRECTORS



Henry S. Lodge

CHAIRMAN
OF THE BOARD



Forrest I. Neal, Jr.



Richard D. Buck



Francis B. Gummere

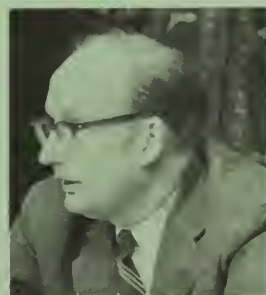


John J. McCarthy



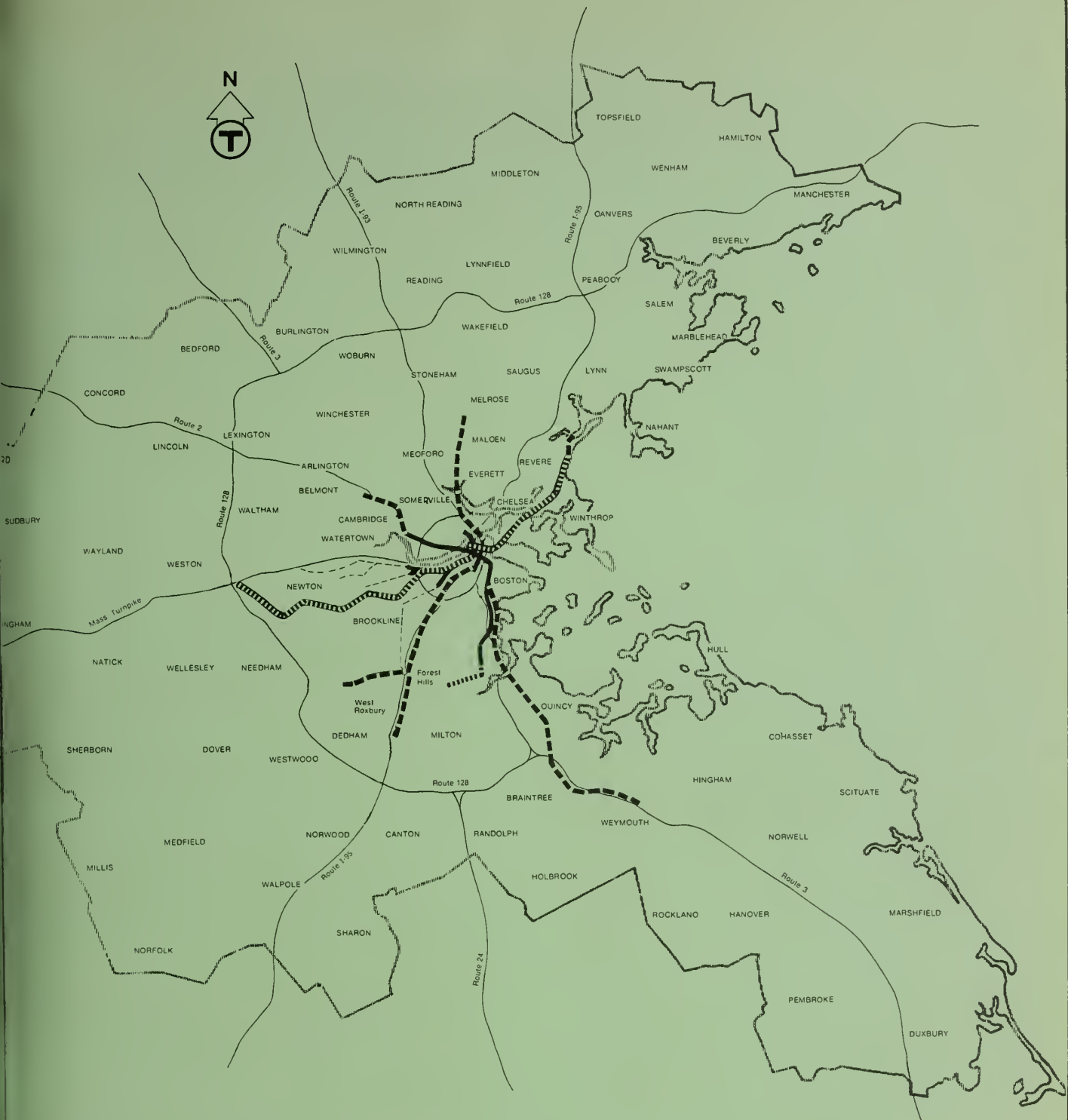
William J. Fitzgerald

In August of 1970, Dr. Robert C. Wood
resigned as chairman of the Board of
Directors. William J. Fitzgerald com-
pleted his term as a member of the Board
of Directors in August of 1970.







Dr. Robert C. Wood





RAPID TRANSIT ACTION PROJECTS

Key:

-  EXISTING RAPID TRANSIT
-  EXISTING FACILITY TO BE UPGRADED
-  NEW RAPID TRANSIT
-  EXPRESSWAYS, EXISTING & PROGRAMMED
- NOT SHOWN: EXISTING AND FUTURE BUS NETWORK
- EXISTING AND FUTURE RAILROAD SERVICE

Accomplishments of 1970

The fiscal year 1970 saw substantial improvements to the physical condition of the MBTA plant and significant new directions in the operation of services to member cities and towns.

- A total of 186,000,000 revenue passengers were served during the year. The Authority carried over 60% of the region's school trips, with special school bus service transporting over 1,870,000 children. Ridership on the Turnpike Express Bus service rose by 56%, with 1,920,900 revenue passengers carried in 1970. Express bus service was inaugurated between Burlington and Downtown Boston. Direct bus service from the North Shore to Downtown was improved to coincide with ridership growth, which has increased by 60% in two years. Experimental local bus services were instituted in many communities, including a new airport bus to the North Shore.



Turnpike Express Bus

- During the fiscal year, contracts totaling nearly nine million dollars were awarded for the South Shore Line. These contracts were for construction of the Quincy Center Station and parking garage, North Quincy Station and site development, as well as investments in drainage, power, and communications. Although the project was scheduled to open in 1970, a major concrete strike and the bankruptcy of the rail contractor have forced the delay of the opening until summer of 1971.



Quincy Center Station

- During the fiscal year, the Haymarket-North Project saw the completion of the tunnel from Haymarket Station to Charlestown. The Orange Line North Station, with its dramatic suspended mezzanine and skylighting, was inspected on several occasions by local officials and visiting dignitaries. Over six million dollars worth of additional construction contracts were let, for a complex railroad underpass in



Sinking of Tube

Medford, and for trackwork from Haymarket Station to Sullivan Square. Opening of the Haymarket-North Project is now expected in 1974.

- The present phase of the South Cove Tunnel construction is virtually complete, including the structural work on the new South Cove Station. The new tunnel will connect with the Southwest rapid transit extension.



So. Cove Project

Accomplishments of 1970



Maverick Station

- Major modernization work was completed at seven stations: Copley, Kenmore, Prudential, Fields Corner, Columbia, Maverick, and Orient Heights and a new station entrance was opened from the Washington Station on the Orange Line to Franklin Street. Construction continues at Haymarket Station on the Green Line and at State and Essex Stations on the Orange Line where new entrances and escalators are being installed as part of city renewal projects.



Improved Graphic Information System

- The Minor Modernization Program, which will improve the graphic information system in all stations unaffected by the station modernization program, was in early stages of implementation. Lighting and graphics were improved in the Park Street Station, a forerunner of several system-wide environmental improvements to be made during 1971.
- A highly successful, innovative design competition was conducted for the wall graphics at Kenmore Station. Three students from local art schools won U. S. Savings Bonds and today have their artistic work displayed on the murals of the new Kenmore Station. The brightly lit station is one of the most colorful and imaginative accomplishments of the Station Modernization Program.



Kenmore Mural Design Competition

- The Authority initiated a design competition through the Institute of Contemporary Art for the creation of a wall mural at the State Station walkway. This innovative program has received financial support from the Rockefeller Foundation.
- In the planning sphere, 1970 brought several major activities. The Central Area Systems Study was completed, and its principal recommendations were immediately incorporated into the Authority's \$250 million Funds for Transit Program. This exhaustive engineering study has resulted in a high priority being placed on the creation of a modern light rail network being created as a permanent solution to the serious problems of Green Line service.

Accomplishments of 1970

- Important interagency planning efforts were maintained. Participation in continuous transportation work has assured full coordination with the many agencies responsible for the region's transportation. The Authority actively participated in the design of the Boston Transportation Planning Review. The Authority's participation, ordered by Governor Francis W. Sargent, has ensured that important planning and engineering will proceed simultaneously with the study, with transit decisions timed to bring about the earliest possible improvements in the public transportation system. The Authority's activity in this process is geared to produce maximum coordination with the new state Department of Transportation and Construction.

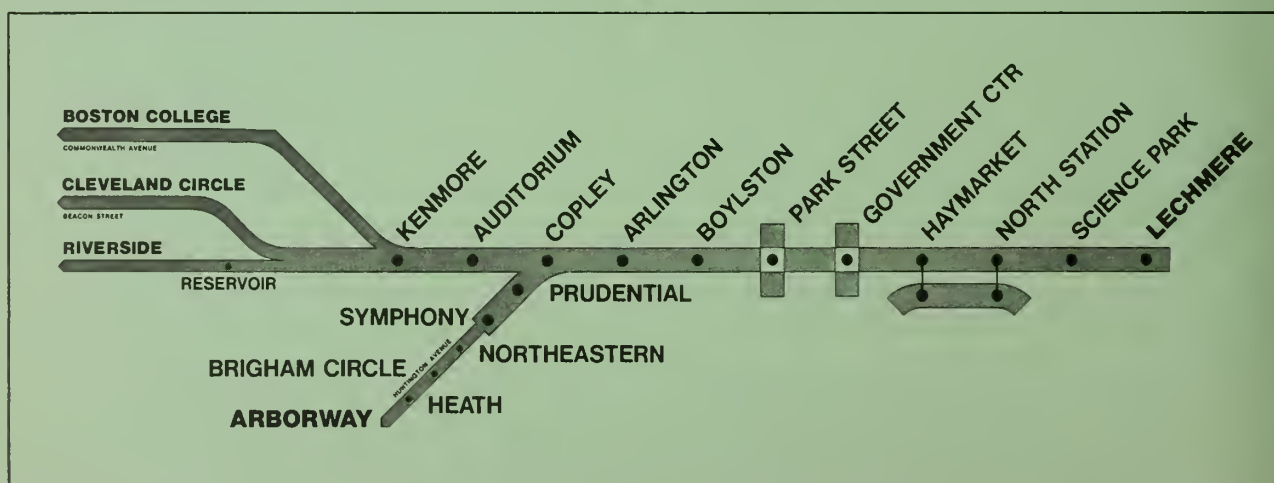
- The MBTA inherited a debt of \$145 million from the Metropolitan Transit Authority, which will not be retired until the year 2024. The annual cost of this debt was \$3,698,259 for 1970. This figure is included in the net cost of service. The Authority has issued \$176,865,000 in bonds, of which \$66,865,000 was floated in 1970. These bonds will be retired over a 40-year period, and will be used for construction of the South Shore and Haymarket-North rapid transit extensions; to modernize existing stations; for the purchase of new buses; and to purchase the original Cambridge subway, built between 1909 and 1912, from the Commonwealth of Massachusetts as directed by Chapter 513 of the Acts of 1970.

- Toward the close of 1970 the Authority began a program to implement an exact fare system on all surface lines.



Bus Fuel Injector Maintenance for Pollution Free Operation

- During 1970, the Authority developed a program to combat air pollution. Low sulphur fuels are now burned in the Authority's power plants. New fuel injection systems are being installed in all buses capable of modification. All new buses will be purchased with catalytic mufflers, to comply with new Federal regulations.



T Green Line Improvements Included in Central Systems Study

- OAK GROVE
- MALDEN
- WELLINGTON
- SULLIVAN SQ.
- COMMUNITY COLLEGE
- NORTH STATION
- HAYMARKET
- STATE
- WASHINGTON
- ESSEX
- DOVER
- NORTHAMPTON
- DUDLEY
- EGGLESTON
- GREEN
- FOREST HILLS

HAYMARKET-NORTH

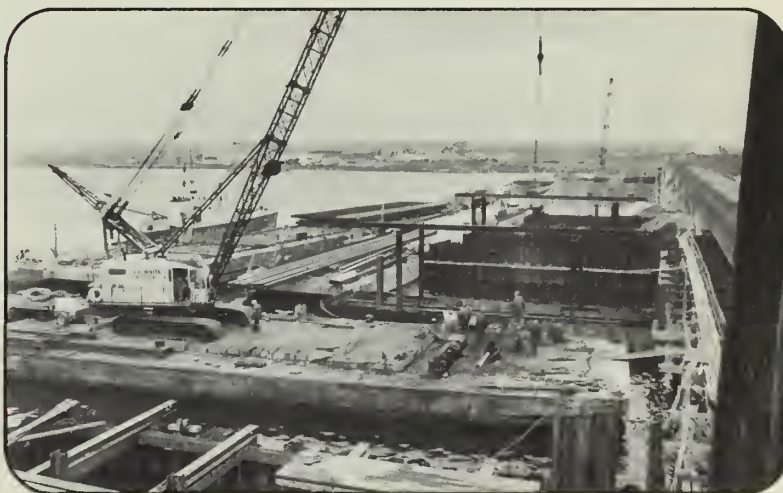
Extension of the

ORANGE LINE

1970



Community College Station



T's Mystic Bridge Area



North Station

HARVARD

CENTRAL

KENDALL

CHARLES



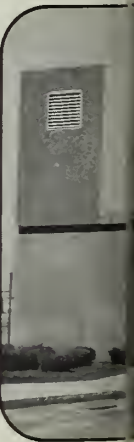
QUINCY CENTER STATION & GARAGE



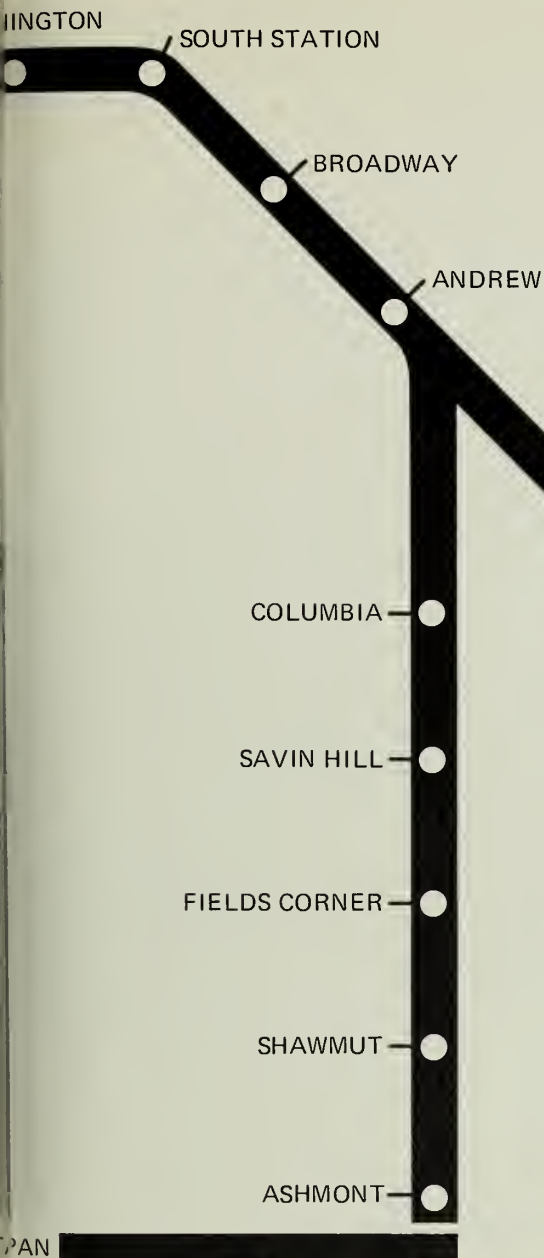
Savin Hill Flyover



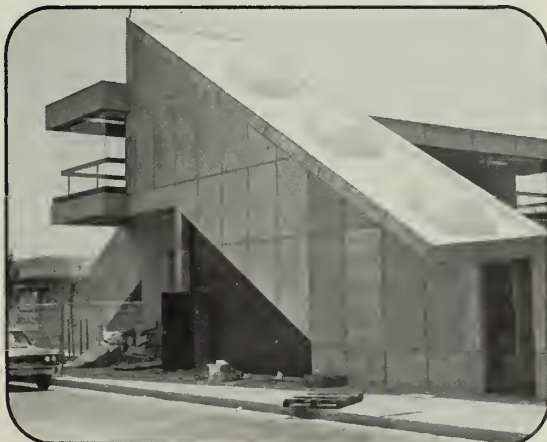
George L. Anderson Bridge



North Quincy



SOUTH SHORE RAPID TRANSIT EXTENSION 1970




North Quincy Station



Wollaston Station

OPERATIONS CENTER



New  Operations Center



Surface Transportation Control



Rapid Transit Control

OPERATIONS CENTER

The Control Center at 45 High Street, near Dewey Square, includes a master control console, a dispatchers' console, track headway recorders and the dispatching equipment, a high speed electronic supervisory control system, and a visual display readout for automatic car identification with a permanent record provided by teletype.

From the master control console, the supervising dispatcher can select automatic or manual operation at both Ashmont and Quincy Center, also automatic or manual route selection to Columbia Junction. He can also control the snow melters at switches during inclement weather, summon maintenance personnel, change schedules and check the position and proper operation of all switches and signals. Different colored indicators on the illuminated track diagram identify Cambridge, Dorchester or South Shore train, as well as the train's position and progress.

The train dispatcher console displays information to enable the dispatcher to monitor the automatic dispatching equipment and to alter it when needed. The console also includes telephone and radio communication equipment which provides instant contact with the trains and walkie-talkie communications with train starters and inspectors.

MAJOR STATION MODERNIZATION 1970



y



ore



l Corner



ubia



Maverick



Orient Heights



Prudential



Washington (Franklin St. Entrance)

Capital Program Development

In the last months of 1970, Congress passed the Urban Mass Transportation Assistance Act into law, providing \$3.1 billion for mass transportation assistance grants. Massachusetts' share will amount to over \$400 million, subject to sharing agreements provided locally. For the Authority, this funding agreement meant that several important projects, stalled for lack of financing, could, with legislative assistance, get underway again. Based on available federal funding, the Authority submitted a new proposal for bonding authorization to the General Court of Massachusetts. This request for \$250 million bonding authorization would provide local sharing to be matched against the available federal monies — a total of nearly \$700 million in construction activity to improve the mass transportation system for the Greater Boston area.

The proposal has been specifically prepared to help ameliorate the condition of the present dilapidated plant and equipment facilities, including a substantially improved trolley car fleet, an investment in new and improved roadbeds, new maintenance garages, a major infusion of new buses and a replacement of the 1923 cars on the East Boston line.

In addition, the Authority has recommended expanding the system by adding a modern rapid transit facility in the Southwest Cor-

ridor from downtown to West Roxbury, an extension of the Cambridge-Dorchester system from Harvard Square to Route 2 and Alewife Brook Parkway, an extension of the East Boston line to Pines River in Revere and an extension of the South Shore line to Weymouth or Holbrook.

With respect to commuter railroad service, funds were requested as a reserve for improvements to stations and parking lots if the Legislature elects to retain any commuter lines. Alternatively, if commuter railroad service is discontinued, such a reserve should be used for the purchase of selected rights-of-way to assure their preservation as corridors within which people can be moved.

If bonding authorization is passed by the Legislature in 1971, the program will effect both long- and short-term improvements. Operating economies will be instituted by, for example, alleviating the expense involved in maintaining a fleet of trolley cars whose average age of over 25 years and whose repair facilities are largely pre-turn of the century. By providing more modern and comfortable facilities, the Authority believes that the downward spiral in ridership can be halted. By undertaking these projects, including the extensions, the Greater Boston area will have a complete mass transportation system capable of meeting the needs of the area residents.

Recommendations for Legislation

In the 1970 legislative session, the Authority made three major recommendations for transportation funding. Two of these were enacted into law, while the third was rejected. The legislature authorized the Executive Office for Administration and Finance to make further grants to the Authority for the purpose of providing for the continuation of commuter railroad service to and from the City of Boston until July 31, 1971. In addition, the legislature voted to authorize the Authority to refund certain bonds of the Commonwealth issued for the purchase and improvement of the Cambridge subway and provide for state aid of bond anticipation notes of the Authority.

However, the legislature did not approve the most important bill filed by the Authority. The Request for Added Funds was denied, causing the delay of several important projects in the Authority's capital expansion program. This year the Federal government passed the Urban Mass Transportation Assistance Act of 1970, which provides for two federal dollars of assistance for every one dollar of local share. It is known that the inter-regional competition for these funds will increase year by year, and any delay in obtaining local matching funds impairs the Authority's ability to obtain maximum federal assistance. A significantly revised request for increased bonding authorization has been filed for the 1971 legislative session. The continuance of the Authority's Program for Mass Transportation depends upon the passage of this critical legislation.

The 1970 legislative session saw the enactment of two bills filed by the Authority. The legislature further extended the time within which the Metropolitan District Commission

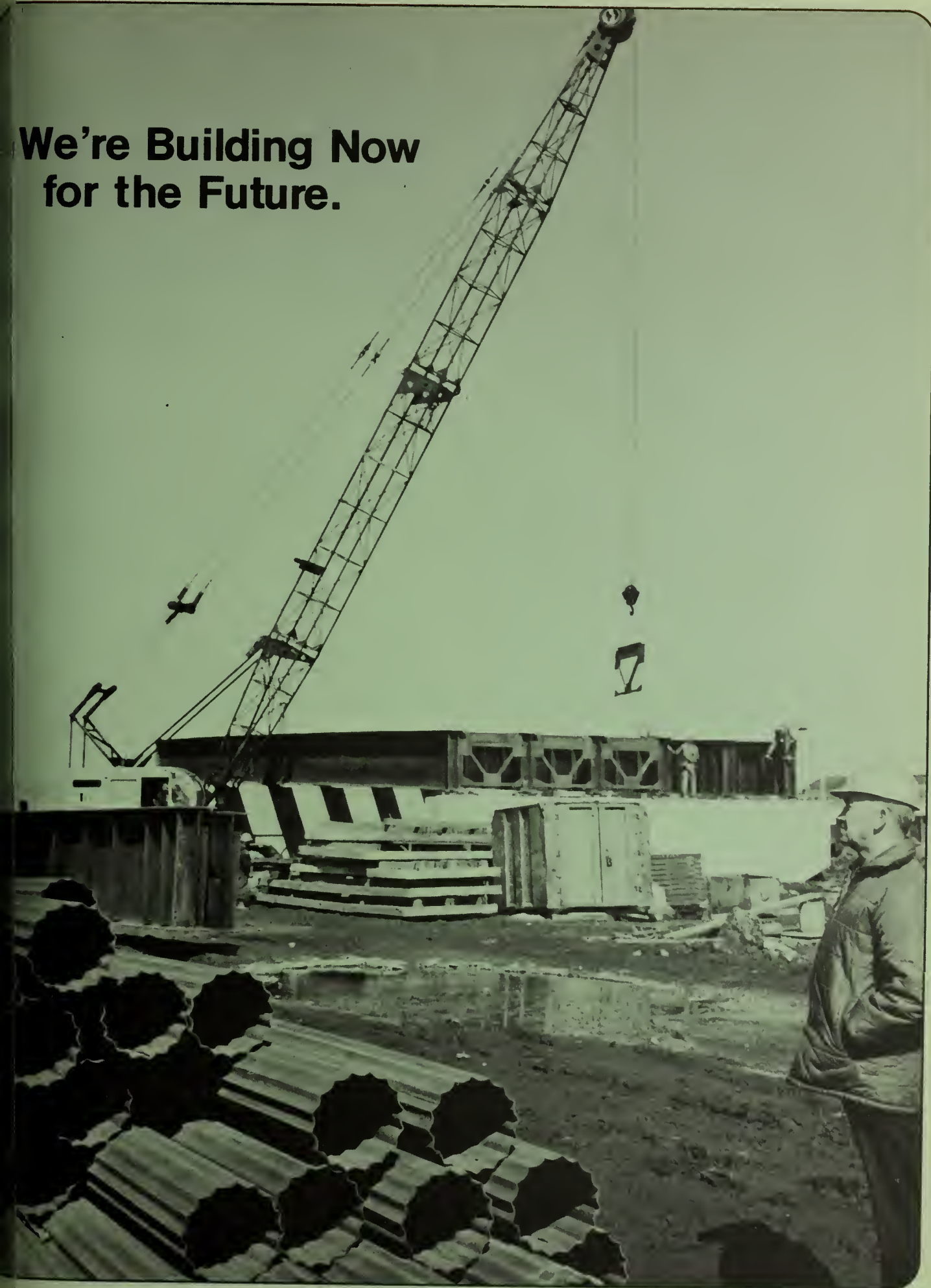
is authorized to convey a certain parcel of land located in Cambridge, Arlington, and Belmont to the Authority. Likewise, a bill providing that no bonds be required for the removal of certain actions from district courts by political subdivisions was enacted.

Several other bills were presented to the legislature. Proposals were made to strengthen laws concerning malicious destruction, the throwing of missiles, pickpocketing, disorderly conduct, and smoking on public conveyances and certain transportation facilities. Other bills sought arbitration on negotiations between labor organizations and the Authority, in service training for Authority police officers, and alteration of the law requiring guards on rapid transit trains. Additional legislation concerned restrictions on the length of buses, standardization of relocation expense payments in eminent domain, air rights authorization, the selling of power plants, concessions and the leasing of property.

In addition to the Funds for Transit request for increased bonding authorization, the Authority has filed bills in the 1971 session to provide state aid on bond authorization notes not covered by existing legislation, and to provide for the continuation of essential commuter railroad service until August 1, 1976. Other bills seek the repeal of Chapter 628, prohibiting the Authority from disposing of or selling its power plants. Alternatively, legislation has been filed to authorize additional bonds for power generating plants and substations. Certain bills have been refiled concerning training for Authority police officers, changes in certain powers of the Authority, and entrance on private land for purposes of surveys, soundings and drillings.



**We're Building Now
for the Future.**



Balance Sheet

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

December 31, 1970

ASSETS

TRANSPORTATION PROPERTY, at cost:		
Transportation property in service	\$236,929,378	
Construction in progress (Note 10)	127,921,507	
	<u>\$364,850,885</u>	
Less— Reserve for depreciation (Note 7)	97,337,174	\$267,513,711
SPECIAL FUNDS — Cash, Certificates of Deposit and U. S. Government Securities, at cost:		
Construction funds, held by the bond fiscal agent	\$ 53,449,839	
Funds received for relocation of facilities (Note 3)	916,512	
Federal grants (Note 8)	1,128	
Other special funds	<u>778,741</u>	55,146,220
CURRENT ASSETS:		
Cash	\$ 2,723,464	
Certificates of Deposit and U. S. Government Securities, at cost	65,098,877	
Accounts receivable —		
Commonwealth of Massachusetts	6,208,598	
Boston Redevelopment Authority (Note 8)	3,624,657	
Other	2,292,896	
Materials and supplies, at average cost	3,014,473	
Prepaid expenses	<u>215,041</u>	83,178,006
DEFERRED CHARGES:		
Unamortized expansion and modernization costs (Note 1)	\$ 9,861,897	
Other	<u>921,306</u>	10,783,203
		<u>\$416,621,140</u>

LIABILITIES

LONG-TERM DEBT, exclusive of current maturities, see accompanying statement (Note 9)		\$282,937,114
UNREIMBURSED COST OF SERVICE (Note 7)		(9,641,163)
CURRENT LIABILITIES:		
Current maturities of long-term debt	\$ 8,776,259	
Notes payable	60,000,000	
Accounts payable	10,581,068	
Accrued liabilities —		
Payroll	1,100,772	
Interest	3,230,333	
Other	2,172,474	
Unredeemed tickets and tokens	<u>181,895</u>	86,042,801
COMMITMENTS AND CONTINGENCIES (Notes 4, 5, 6 and 10)		
DEFERRED CREDITS (Note 3)		6,967,711
GRANTS — UNAMORTIZED PORTION (Note 8):		
Federal grants	\$44,059,519	
Boston Redevelopment Authority	<u>6,255,158</u>	50,314,677
		<u>\$416,621,140</u>

The accompanying notes are an integral part of these financial statements.

STATEMENT OF REVENUE AND COST OF SERVICE
FOR THE THIRTEEN MONTH PERIOD
ENDED DECEMBER 31, 1970

OPERATING REVENUE:

Transportation.....	\$ 60,677,691
Other.....	940,686
	<u>\$ 61,618,377</u>

OPERATING EXPENSES (Note 11):

Transportation service.....	\$ 53,404,353
Maintenance.....	24,234,261
Electric power.....	4,292,278
Depreciation (Note 7).....	8,341,520
General and administrative expenses —	
Salaries and wages.....	6,168,259
Employee pension and insurance	
benefits (Note 4).....	13,451,354
Injuries and damages and workmen's	
compensation claims (Notes 5 and 6)	3,135,005
Other.....	1,901,363
	<u>\$114,928,393</u>

Operating loss \$ (53,310,016)

OTHER INCOME, including interest
of \$4,918,767

5,179,708

INTEREST EXPENSE, including
\$9,162,381 on long-term debt

(12,511,415)

RAILROAD COMMUTER SUBSIDIES,
including amortization of the original
Railroad Contract Assistance Program
of \$352,083 (Notes 1 and 2)

(1,181,597)

Cost of service in excess of revenue \$ (61,823,320)

STATEMENT OF UNREIMBURSED COST OF SERVICE
FOR THE THIRTEEN MONTH PERIOD
ENDED DECEMBER 31, 1970

BALANCE NOVEMBER 30, 1969..... \$ 9,007,443

ADD— Cost of service in excess of revenue
for the thirteen month period ended

December 31, 1970..... 61,823,320

DEDUCT:

Cost of service reimbursed by the Common-
wealth of Massachusetts to be assessed to the
cities and towns constituting the Authority (51,209,670)

Contract Assistance, portion of the cost
of service paid by the Commonwealth of
Massachusetts in accordance with a con-
tract for financial assistance between the
Authority and the Commonwealth, pur-
suant to Chapter 563 of the Acts of 1964
and Chapter 147 of the Acts of 1968 (8,836,687)

Cost of service reimbursed by the cities
and towns outside the Authority's area (181,232)

State diesel and gasoline fuel taxes re-
imbursable to the Authority in accord-
ance with Section 2 of Chapter 563
of the Acts of 1964 (367,647)

Amortization of Federal grants (Note 8) (594,364)

BALANCE DECEMBER 31, 1970 (Note 7) \$ 9,641,163

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF SOURCE AND DISPOSITION OF FUNDS
FOR THE THIRTEEN MONTH PERIOD
ENDED DECEMBER 31, 1970

CASH BALANCE — NOVEMBER 30, 1969

\$ 7,395,632

FUNDS WERE PROVIDED FROM:

Commonwealth of Massachusetts —	
To be assessed to the cities and towns	
constituting the Massachusetts Bay	
Transportation Authority —	
Amount due on the 1969 deficit..	\$ 3,169,442
Advance on the 1970 deficit.....	48,000,000
Contract assistance in accordance	
with Section 28 of Chapter 563	
of the Acts of 1964.....	8,312,276
Contract assistance in accordance	
with Section 1 of Chapter 578 of	
the Acts of 1969 and Section 1 of	
Chapter 604 of the Acts of 1970 ..	5,062,876
State diesel and gasoline fuel taxes	
reimbursable to the Authority in	
accordance with Section 2 of	
Chapter 563 of the Acts of 1964 ..	348,191
Federal Grants	8,109,637
Proceeds from sale of 1970 Series	
A Bonds	66,865,000
Proceeds from short-term notes,	
net of payments	11,500,000
Other sources, net.....	4,612,347
	<u>\$155,979,769</u>

FUNDS WERE USED FOR:

Cost of service in	
excess of revenue \$61,823,320	
Less -	
Depreciation and amortization	
charges to cost of service which	
did not require an expenditure	
of funds (8,693,603)	\$ 53,129,717
Payment of Railroad Commuter	
Subsidies - Commonwealth of	
Massachusetts portion.....	5,140,999
Purchase of Certificates of Deposits	
and U.S. Government Securities,	
net of sales	20,145,295
Payment of long-term debt	6,898,259
Expenditures related to the expansion	
and modernization of the trans-	
portation system.....	1,069,080
Additions to transportation	
property, net.....	67,357,749
Reduction in deferred credits	526,668
Additions to Special Fund	
accounts, net	6,384,170
	<u>\$160,651,937</u>

NET DECREASE IN CASH

(4,672,168)

CASH BALANCE — DECEMBER 31, 1970

\$ 2,723,464

The accompanying notes are an integral part of these financial statements.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF LONG-TERM DEBT (Note 9) DECEMBER 31, 1970

Massachusetts Bay Transportation Authority General Transportation System Bonds issued under General Laws, Chapter 161A, Section 23 of the Commonwealth of Massachusetts, 1967 Series A, dated March 1, 1967, and 1970 Series A, dated September 1, 1970, both payable in annual installments on March 1 -- interest is payable semiannually on March 1 and September 1.

1967 Series A Bonds -- The proceeds of the sale of the 1967 Series A Bonds were required to be used for payment of \$40,000,000 of Bond Anticipation Notes outstanding and the balance of \$70,000,000 were required to be deposited in the Bond Proceeds accounts. These bonds were issued to provide funds for the purposes outlined below. The debt outstanding at December 31, 1970 is as follows:

Purpose	First Principal Payment	Year of Maturity	Approximate Annual Payment	Average Interest Rate	
Express service transportation facilities	1969	2007	\$1,900,000	3.79%	\$ 70,250,000
Agreement with railroads	1968	1982	325,000	3.75	4,025,000
Buses and other purposes	1968	1979	300,000	3.75	2,900,000
Local service transportation facilities	1969	2007	50,000	3.79	1,850,000
Capital cost of certain transportation facilities including yards, shops and rolling stock	1969	2007	625,000	3.79	23,950,000
					<u>\$102,975,000</u>

1970 Series A Bonds -- The proceeds of the sale of the 1970 Series A Bonds were required to be used for payment of \$5,365,000 of Bond Anticipation Notes outstanding and the balance of \$61,500,000 were required to be deposited in the Bond Proceeds accounts. These bonds were issued to provide funds for the following purposes:

Purpose	First Principal Payment	Year of Maturity	Approximate Annual Payment	Average Interest Rate	
Express service transportation facilities	1971	2010	\$1,540,000	6.32%	\$ 61,500,000
Buses and other purposes	1971	1982	295,000	6.17	3,500,000
Purchase and improvement of the Cambridge subway	1971	1980	190,000	6.20	1,865,000
					<u>\$ 66,865,000</u>

Metropolitan Transit Authority Bond, payable in semiannual installments of \$500,000 to December, 2020 -- Interest payable is the interest payable by the Boston Metropolitan District on their contra debt and refunding issues, which for the thirteen month period ended December 31, 1970 was 3.12%

\$ 49,918,373

Rapid Transit Bond, payable in annual installments of \$536,259 to November, 2024 -- interest is the actual interest on the City of Boston Transit Debt and refunding issues less income collected on the City's transit debt sinking funds, which for the thirteen month period ended December 31, 1970 was 3.53%

\$ 28,958,000

Equipment Serial Bonds:

Year of Maturity	Approximate Annual Payment	Interest Rate		
1971	\$ 84,000	1.50%	\$ 84,000	
	139,000	3.10	139,000	\$ 223,000
1973	45,000	2.50	\$ 135,000	
	90,000	3.50	270,000	405,000
1974	8,000	3.00		28,000
1975	122,000	3.00		598,000
1977	218,000	3.00		1,532,000
1978	206,000	3.00		1,436,000
1981	127,000	1.50		1,397,000
1987	127,000	2.90		2,167,000
1988	131,000	2.90		2,358,000
1993	169,000	3.00	\$3,887,000	
	100,000	3.20	2,300,000	6,187,000
	<u>\$1,566,000</u>			<u>\$16,331,000</u>

Construction Bonds:

2.00%, payable \$102,000 per annum to November 21, 1979, and \$4,590,000 on November 25, 1979	\$ 5,508,000
1.50%, payable \$84,333 per annum to March 1, 1981, and \$3,781,667 on March 1, 1981	4,709,333
2.10%, payable \$22,000 per annum to January 15, 1982, and \$990,000 on January 15, 1982	1,254,000
2.75%, payable \$47,000 per annum to March 1, 1983, and \$2,115,000 on March 1, 1983	2,726,000
2.30%, payable \$10,000 per annum to March 1, 1984, and \$450,000 on March 1, 1984	590,000
3.00%, payable \$55,000 per annum to July 1, 1988, and \$2,475,000 on July 1, 1988	3,465,000
3.60%, payable \$69,667 per annum to February 1, 1989, and \$3,135,000 on February 1, 1989	4,458,667
3.50%, payable \$19,000 per annum to September 15, 1990, and \$855,000 on September 15, 1990	1,235,000
3.20%, payable \$40,000 per annum to April 15, 1993, and \$1,800,000 on April 15, 1993	2,720,000
	<u>\$ 26,666,000</u>
	<u>\$291,713,373</u>
Less -- Current maturities of long-term debt	8,776,259
Long-term debt	<u>\$282,937,114</u>

The accompanying notes are an integral part of these financial statements.

Notes to Financial Statements

December 31, 1970

1 UNAMORTIZED EXPANSION AND MODERNIZATION COSTS

The Authority has deferred certain expenses related to the expansion and modernization of the transportation system. Such costs include the Authority's share, \$4,025,000, under the original Railroad Contract Assistance Program for the railroads which have temporarily continued passenger service until such time as permanent alternative facilities have been constructed by the Authority. These costs are being amortized by charges to the cost of service over 15 years which amounted to \$352,083 in 1970. In addition, there is included \$580,800 of costs not assigned to assets in connection with the acquisition of the Eastern Mass. Railway Company. These costs are being amortized by charges to cost of service over 40 years which amounted to \$16,600 in 1970.

The other deferred expenses relating to the expansion and modernization of the transportation system will be amortized by charges to the cost of service, commencing with the completion of the initial project for mass transportation.

2 RAILROAD COMMUTER SUBSIDIES

Under Chapter 24 of the Acts of 1967 and Chapter 728 of the Acts of 1968 as amended by Chapter 578 of the Acts of 1969 and Chapter 604 of the Acts of 1970, the Authority and the Commonwealth of Massachusetts entered into agreements whereby the Commonwealth has agreed to provide 90% of the cost of financing agreements with the railroads to provide service to and from Boston until July 31, 1971, but not to exceed \$18,846,000. In accordance with these agreements, financial assistance received by the Boston & Maine and Penn Central Railroads and related expenses thereto amounted to \$5,970,513 during the thirteen months ending December 31, 1970; \$5,140,999 paid by the Commonwealth and \$829,514 paid by the Authority.

3 RELOCATION OF FACILITIES

In April, 1967, the Authority entered into an agreement with the John Fitzgerald Kennedy Library Incorporated, whereby the Authority would relocate certain transportation facilities in order to convey certain properties to the United States and the Library Corporation.

The Commonwealth of Massachusetts appropriated \$6,098,400 to the Authority for the part of the properties conveyed to the United States. In addition, the Authority received \$1,330,112 from the Library Corporation for the remaining part of the properties, totaling \$7,428,512.

These facilities, having a net book value of \$709,807, have been retired. The amount received in excess of net book value (\$6,718,705) has been included in deferred credits to be offset against the cost of relocation.

In December, 1969, the Authority purchased for \$7,000,000 a parcel of property to be used to replace the facilities conveyed in 1967.

4 PENSION

The Authority has agreed to provide retirement benefits to employees through a contributory pension plan which requires the payment by the Authority of an amount not less than 11-5/8% of the total payroll of employees who are members of the plan but, in any event, sufficient to provide for the current cost of the plan and interest on unfunded past service costs net of members' contributions. The total pension costs for the thirteen months ended December 31, 1970, was \$9,350,000 which includes interest on unfunded past service costs but does not include amortization of the unfunded past service costs. The Authority is not legally obligated, under the agreement, to fund the actuarial cost of future benefits to present and retired employees based on past service costs. As of December 31, 1970, such unfunded costs approximated \$75,000,000. The actuarially computed value of the vested benefits of the plan as of December 31, 1970, exceeded the pension fund assets by approximately \$18,000,000.

Subsequent to December 31, 1970, the plan was amended increasing certain retirement benefits. An actuarial study to determine the effect of the revisions has not yet been completed, however, in the opinion of management, the annual cost of the plan, the amount of unfunded past service cost and the actuarial value of vested benefits will not increase a material amount.

5 INJURIES AND DAMAGES

The Authority is a self-insurer on claims for injuries and damages to the extent of \$100,000 per accident. Insurance coverage is carried on claims in excess of that amount up to a maximum limit of \$15,100,000 per accident. The Authority accounts for injuries and damages by charges to operating expenses as payments are made.

6 WORKMEN'S COMPENSATION INSURANCE

Effective May 1, 1965, the Authority became a self-insurer on workmen's compensation claims under the workmen's compensation laws of the Commonwealth of Massachusetts to the extent of \$50,000 per occurrence. Insurance coverage is carried on each occurrence in excess of that amount up to a maximum limit of \$2,050,000 per occurrence. The Authority accounts for these claims by charges to operating expenses as payments are made.

Prior to May 1, 1965, the Authority was insured for workmen's compensation claims by an affiliate, The Transit Mutual Insurance Company. Transit Mutual's reserve for workmen's compensation claims as of May 1, 1965, has been carried over in the accounts of the Authority. The Authority charges payment of claims incurred prior to May 1, 1965 to this reserve.

Notes to Financial Statements December 31, 1970



UNREIMBURSED COST OF SERVICE

The legislative act under which the Massachusetts Bay Transportation Authority was established provides, among other things, that the Commonwealth of Massachusetts shall reimburse the Authority for the net cost of service. The amounts reimbursed are then assessed to the 79 cities and towns constituting the Authority. The net cost of service includes a charge for depreciation equal to the payments on long-term debt during the period.

The Authority provides for depreciation by following the generally accepted method of amortizing the cost of property over its estimated remaining useful life. In the current thirteen month period the Authority provided \$8,341,520 for depreciation of which \$7,113,436 represents payments on long-term debt. The balance of \$1,228,084 has been charged to the unreimbursed cost of service which will be recovered in future years when payments on long-term debt exceed depreciation computed on the estimated remaining useful life of the property.



GRANTS

Under the Urban Mass Transportation Act of 1964, the Department of Transportation has approved for the Authority grants aggregating \$109,100,000. The Authority has received \$45,431,810 of this amount. These funds have been used by the Authority to purchase new buses and to modernize and expand mass transportation facilities.

Under an agreement between the Boston Redevelopment Authority and the Massachusetts Bay Transportation Authority, the BRA has approved grants aggregating \$12,000,000 in connection with the expansion of mass transportation facilities. The Massachusetts Bay Transportation Authority has incurred costs totaling \$6,255,158 related to this agreement. Of this amount they have not yet been reimbursed by the BRA for \$2,429,809 which is included in accounts receivable. Although substantially all of this amount and other amounts receivable from the BRA are past due, in the opinion of management, the receivable is collectible.

The grants are carried as a deferred credit and will be amortized over the life of the assets as an offset to the applicable depreciation expense. In the current thirteen month period, \$594,364 of amortization has been credited to the unreimbursed cost of service.



LONG-TERM DEBT

The legislative act under which the Massachusetts Bay Transportation Authority was established provides, among other things, if at any time any principal or interest is due on any bond or note issued or assumed by the Authority and funds to pay the same are not available, the Commonwealth of Massachusetts shall thereupon pay over to the Authority the amount required to meet such obligations.



CONSTRUCTION PROGRAM

The Authority's program for mass transportation within the area constituting the Authority, as approved by the Authority's Advisory Board in 1966, is estimated at \$359,000,000. Financing requirements of the program are expected to be met through the issuance of \$225,000,000 of long-term debt securities. The legislative act authorizing the issuance of debt securities calls for participation by the Commonwealth of Massachusetts in the payment of principal and interest on \$145,000,000 of that amount to the extent of 90% for express service projects and 50% for local service projects or assistance to private carriers. The remaining financing requirements are expected to be met through Federal transit aid, Federal urban renewal funds and relocation cost reimbursements.

Expenditures in the program through December 31, 1970, have been financed through the issuance of \$175,000,000 of Massachusetts Bay Transportation Authority General Transportation System Bonds, Federal transit aid funds, and funds from the Boston Redevelopment Authority.

As of December 31, 1970, the Authority has entered into purchase commitments amounting to approximately \$40,000,000.



SUPPLEMENTARY OPERATING EXPENSE INFORMATION

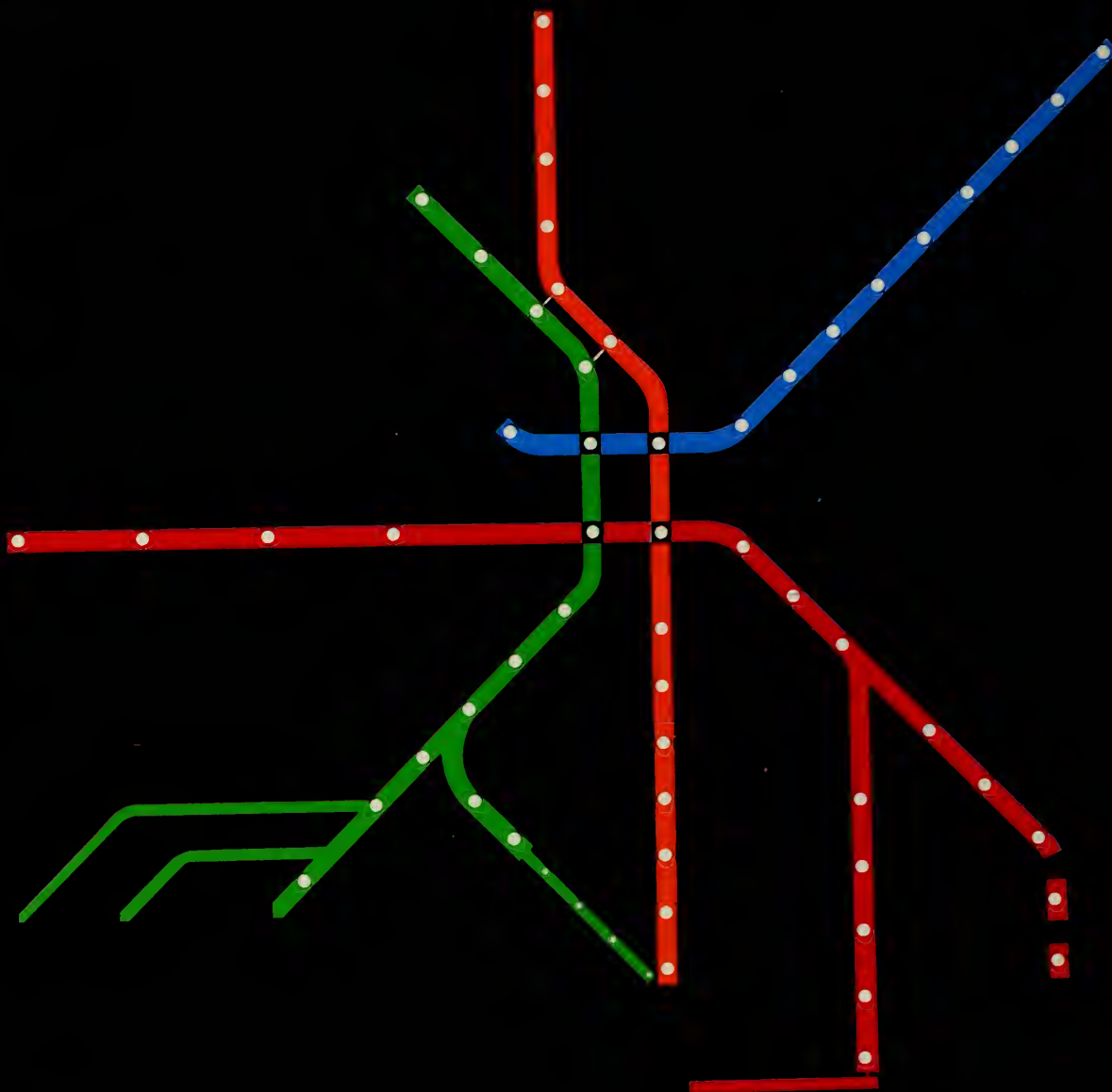
Operating expenses captioned below consist of the following:

Transportation services —	
Salaries and wages	\$47,224,980
Taxes, including payroll taxes	2,301,099
Fuel	956,384
Other	2,921,890
	<u>\$53,404,353</u>
Maintenance —	
Salaries and wages	\$18,057,086
Materials and supplies	5,556,256
Taxes, including payroll taxes	620,919
	<u>\$24,234,261</u>
Electric power —	
Salaries and wages	\$ 2,306,282
Fuel	1,719,721
Taxes, including payroll taxes	78,887
Other	187,388
	<u>\$ 4,292,278</u>



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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

